



Hayden Island Plan
APPENDICES

Section B: Land Use

- B-1 BOP Land Use Inventory Memo** *(versions 9/25/06 & 12/08)*
- B-2 Maps: Preferred Land Use and Park/Open Space**
- B-3 Sketches**
 - Central Core (multiple)
 - Neighborhood Center
- B-4 Light Rail Transit Station Location and Design Considerations (Land Use Impacts)**
- B-5 Hayden Island Final Concept Plan** *12/2008*

Hayden Island Final Plan
APPENDICES

Section B-1

— BOP Land Use Inventory Memo

—Dated 9/25/06

—Latest version dated 12/08



CITY OF PORTLAND, OREGON
BUREAU OF

Planning

Tom Potter, Mayor
Gil Kelley, Director

1900 S.W. 4th Ave., Ste. 4100
Portland, OR 97201-5380

Phone 503-823-7700

FAX 503-823-7800

TTY 503-823-6868

Email pdxplan@ci.portland.or.us

www.portlandonline.com/planning

M E M O

September 25, 2006

To: Kathryn Beaumont, City Attorney

From: Jay Sugnet, City Planner

Cc: John Gillam, Joe Zehnder

Subject: **Hayden Island Land Use Inventory Technical Memo**

183124

This memo summarizes the data collected by the Bureau of Planning in a land use inventory of east Hayden Island within the City of Portland boundary of incorporation and provides additional information on the potential for additional growth based on the zoned capacity of the area. Attached is a map showing the primary land uses by lot of record. Data sheets and the database are available upon request.

Methodology

On August 3, 2006 staff conducted a windshield survey of the island. Data sheets were filled out for each lot of record recording the current land use according to the definitions of use in *Title 33, Planning and Zoning*. In addition, Assessor & Taxation data were checked for general accuracy. The information was entered into a database and basic calculations were performed to create the summary charts below.

Hayden Island Zones – Total Acreage

Zone	Total Acres
CG	260.6
IG2	147.6
R1	8.0
R2	52.3
R3	31.0
R7	7.7
RF	23.1
Total	530.3

Housing

Housing on the island consists of condominiums, manufactured/mobile homes, floating homes, and single-dwelling housing units. Only 54 single-dwelling homes were observed in the R7 and R3 zoned areas. Floating homes, condominiums, and manufactured/mobile homes are all considered multi-dwelling and comprise the remaining 1,399 units. The 118 units in the IG2 zone are all floating homes.

Housing Units by Zone

Zone	Total Units
CG	607
IG2	118
R1	228
R2	299
R3	177
R7	24
RF	0
Total	1,453

Note: units built or permitted as of August 3, 2006

Housing Units by Type

Type	Total Units
Single Dwelling	54
Manufactured	431
Floating Homes	291
Condominiums	677
Total	1,453

Industrial Uses

The industrial uses on the eastern end of the island are primarily marine related – marinas, boat sales and repair, and boat storage. The west end of the island consists of several industrial parks and a large auto auction facility. Overall, there are 699,599 square feet of building space on 8,390,218 square feet of IG2 land.

Sample Industrial Uses by Type

	Total Lot Area square feet	Total Building Area square feet
Auto Wholesale	1,828,856	86,542
Industrial Park	983,563	366,225
Marine Related	878,988	165,042
Vacant	672,089	

Commercial Uses

The CG zone has a total of 1.66 million square feet of commercial building space on 14.32 million square feet of CG land. The CG zone has the greatest variety of uses, including residential and office. A small area is used for institutional uses (e.g. fire station, water distribution) and a small area is part of a street network that is privately owned. The extent of the CG zone is east and west of the interchange with a smaller area of CG on the eastern end of the island. The eastern CG area has a yacht club and a large condominium/marina project phased over the next few years (228 units proposed with 48 currently permitted).

Approximately 1.2 million building square feet are in retail use immediately surrounding the I-5 interchange. This comprises the Jatzen Beach Center, Thunderbird Motel site, Red Lion Inn, and various retail establishments that are zoned CG and are currently used or available for retail use. This area has the greatest potential for more intense uses over time and is discussed in more detail below.

Underutilized Capacity

The zoned capacity of the island is generally higher than the current development pattern. The island has fairly significant regulatory measures to limit residential densities due to the proximity of Portland International Airport. *Chapter 33.470 PDX Airport Noise Impact Zone*, limits residential densities, requires noise insulation, noise disclosure statements, and noise easements for new construction. Specifically, *Section 33.470.050 Additional Residential Regulations* prohibits new residential development within the Ldn 68 noise contour (see attached map).¹ The only exception to this prohibition is if residential zoning applied to a site prior to January 1, 1981. Based on a review of County zoning maps prior to 1981, the sites where this exception applies are currently either permitted or under construction with residential development and are factored into this analysis.

Additional Housing

The residential zones are currently built to capacity and no additional units are anticipated. Additional housing units are only possible in the CG zone. Additional floating homes are possible in the CG zone outside the 68 Ldn noise contour, but estimating the potential capacity of

¹ Approximately 201 acres, or 38 percent, of east Hayden Island is outside the 68 Ldn noise contour and not subject to the additional regulations of Section 33.470.050.

additional floating home is complicated by the number of regulations and the requirements for state and federal agency review of proposals. New condominiums are under construction in the CG zones. The two most recent projects will add 228 units (R237421) and 84 units (R323544). The area where additional housing is allowed and feasible is primarily in the 1.47 million square feet of CG zoned property described below.

Conversion of retail space to housing, office (or a mixture of housing, office, and retail) is a possibility for the 3.4 million square feet of CG zoned immediately surrounding the I-5 interchange and is the basis of the retail scenarios described below. Approximately 1.47 million square feet of CG zoned property (13 percent of all CG zoned land) is outside the boundaries of the Ldn 68 and therefore residential is allowed. CG zoning allows 3:1 FAR, 45 feet of height, and has a maximum site coverage of 85%. The possible range of allowed housing units or office in this area was not calculated since retail uses have a higher traffic impact than housing.²

Additional Industrial

The eastern portion of the island has three vacant and one partially vacant industrial sites totaling approximately 1.01 million square feet of site area. Assuming that the typical size of an industrial facility in Portland, this area could yield an additional 303,000 square feet of building area³. A large site in the western portion of the island is home to an auto wholesaler. These three sites total over 824,000 square feet with only 86,542 square feet of building area. Redevelopment of this site could increase building coverage from 86,542 to 247,206 – an increase of 160,664 square feet of industrial building area.

Additional Retail

The current retail configuration provides generous amounts of surface parking for the large format retail uses. Two redevelopment scenarios of the 1.2 million square feet of buildings on 4.7 million square feet of site area was calculated using both the minimum and maximum required parking standards of *Chapter 33.266, Parking and Loading*. These scenarios assume single-story buildings and surface parking⁴. The only difference between the two is that Scenario 1 uses the minimum number of parking spaces allowed by code and Scenario 2 uses the maximum. Although the *current* market may not necessarily support Scenario 1, the current zoning allows significantly more floor area for retail than currently exists. At a minimum, current zoning and current demand for parking could potentially result in an increase of anywhere between 530,000 and 1.6 million square feet of retail.

Retail Scenarios in the CG Zone

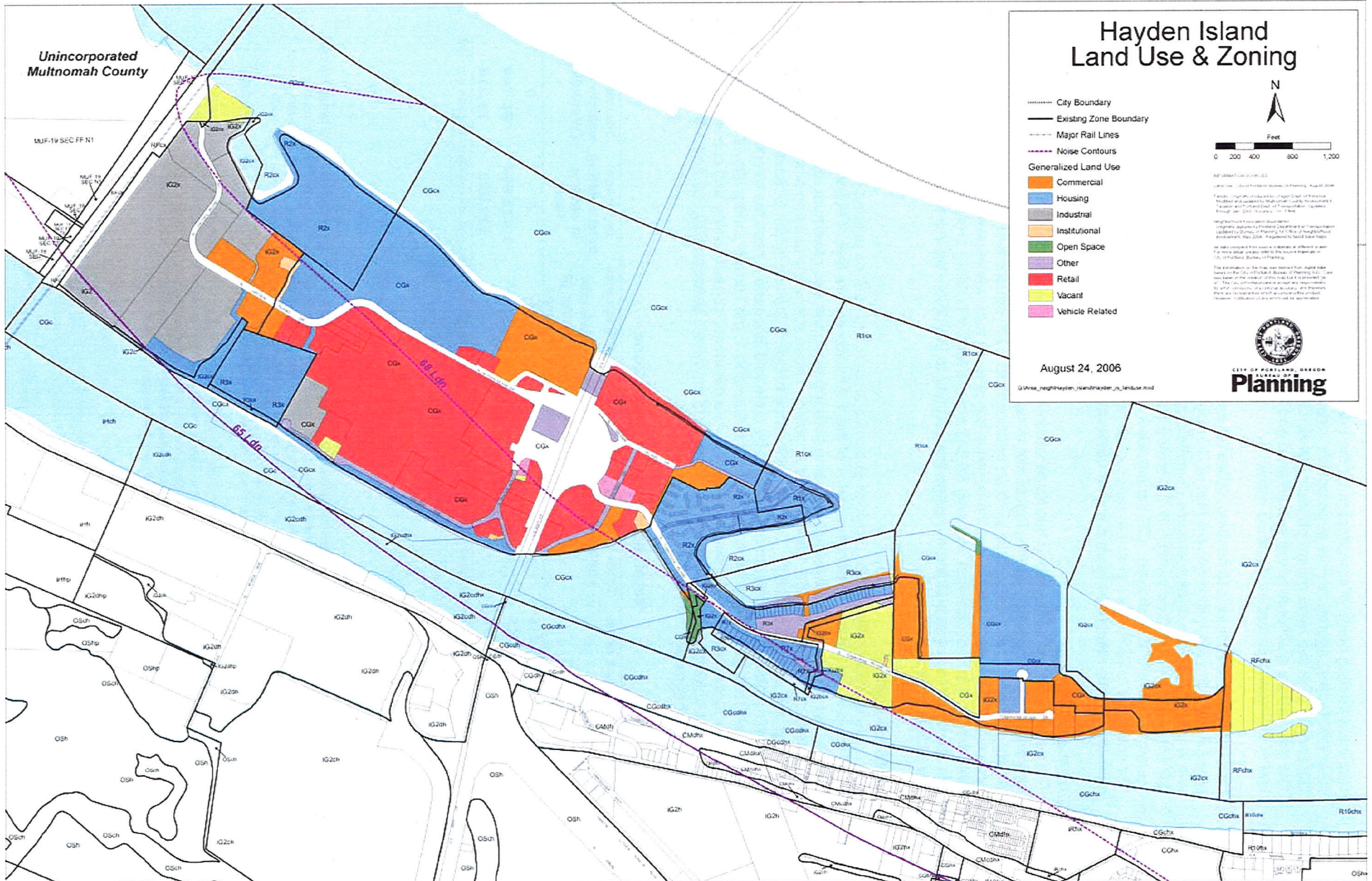
	Lot area	Total building square feet	City parking requirements		Increase over existing in square feet	Increase in vehicle trips (Weekday) ²
			Minimum number of spaces	Maximum number of spaces		
Current	4,760,715	1,205,856	2,412	6,152	0	0
Scenario 1	4,760,715	2,828,540	5,657		1,622,684	80,240
Scenario 2	4,760,715	1,735,839		8,856	529,983	26,218

Note: Minimum parking spaces required for retail is one per 500 square feet of floor area and maximum is 1 space per 196 square feet of floor area.

² *Trip Generation*, Institute of Transportation Engineers, 7th Edition, 2003. The manual states an average weekday trip rate of 4.20 vehicle trips per unit of High Rise Residential development. This is less than either Free Standing Retail or a Shopping Center development that generates an average of 56.02 and 42.94, respectively, trips per 1,000 square feet of retail space. The average weekday trip rate of 49.47 (average of 56.02 and 42.94) was used to project vehicle trip increases in the *Retail Scenarios in the CG Zone* table.

³ Average building coverage of a 4+ multi-tenant industrial facility is 30% for sites in Portland. *Industrial Districts Atlas, Portland, Oregon, 2004*. Bureau of Planning.

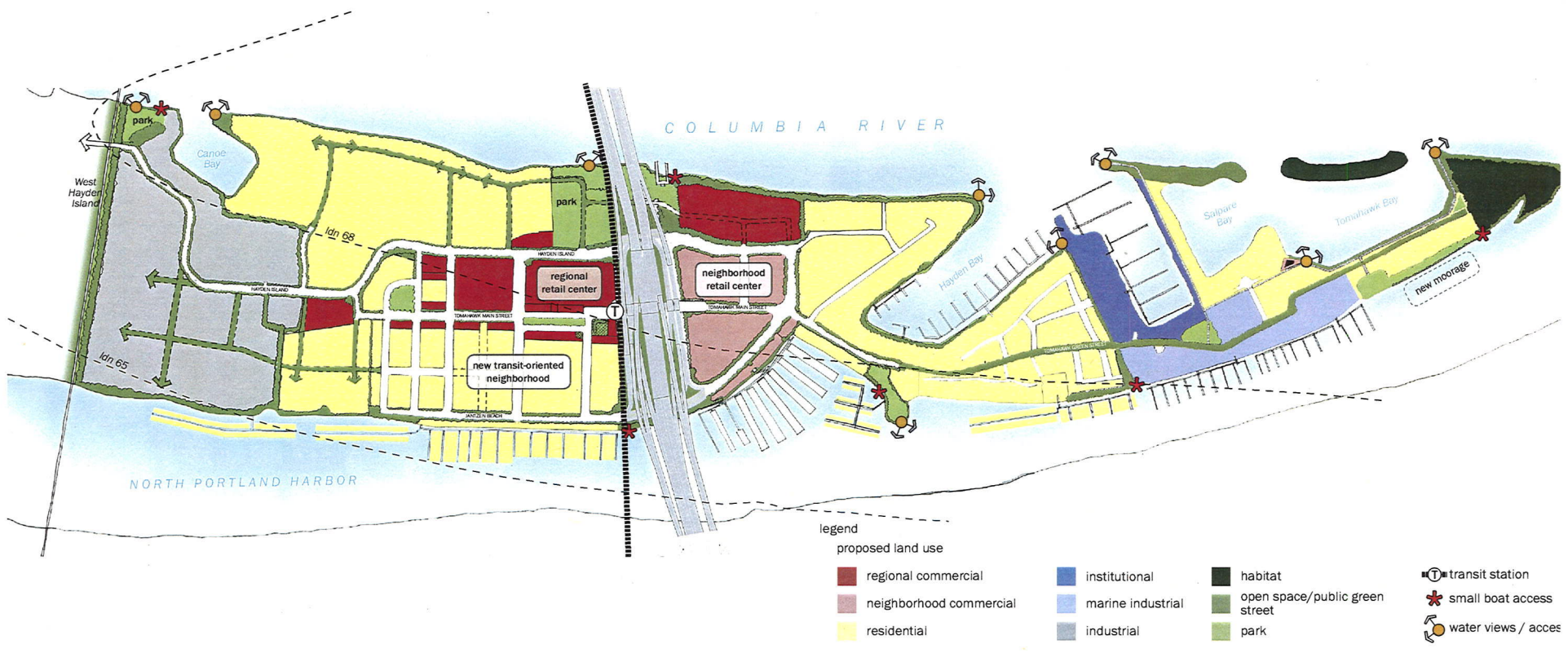
⁴ Assumptions are documented as part of the land use inventory database. Generally, retailers today provide one parking space per 200 - 250 square feet of retail floor area. This is consistent with Portland's maximum parking requirements or Scenario 2. While Scenario 1 is not realistic in today's market, a future redevelopment with high capacity transit nearby could result in more site area devoted to the building versus parking. The current zoning also allows for structured parking and multi-story retail development that could result in additional retail in excess of 1.6 million square feet.



Hayden Island Final Plan
APPENDICES

Section B-2

- **Maps**
 - **Preferred Land Use**
 - **Park/Open Space**



183124

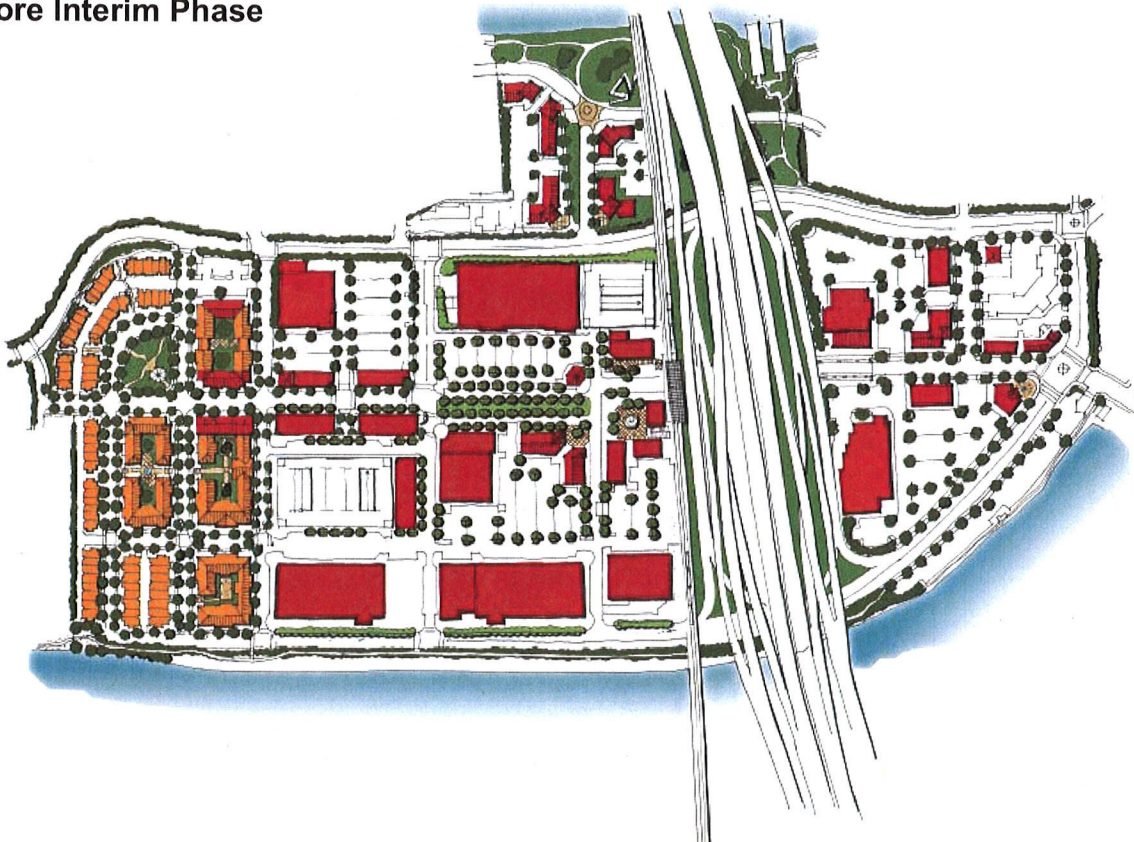


Hayden Island Final Plan
APPENDICES

Section B-3

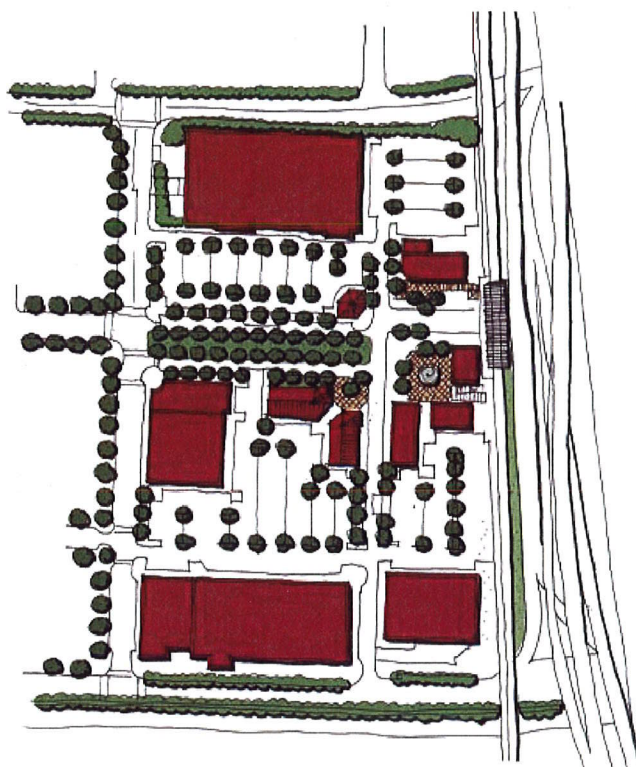
— **Sketches**

- **Central Core** (*multiple*)
- **Neighborhood Center**

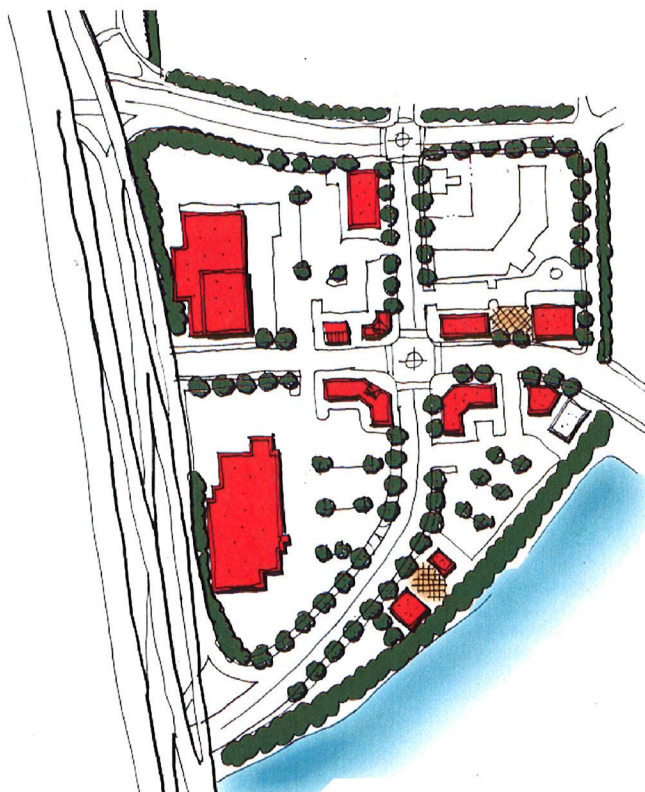
Central Core**Central Core Interim Phase**

Central Core Detail

183124



Neighborhood Center Alternative



Hayden Island Final Plan
APPENDICES

Section B-4

— **Light Rail Transit Station Locations
and Design Considerations**

(Land Use Impacts)

MEMORANDUM

Hayden Island Plan



Light Rail Transit Station Location & Design Considerations

Prepared By: Glatting Jackson Kercher Anglin, Inc.

January 22, 2008

PURPOSE

183124

The City of Portland is developing an area plan for the eastern portion of Hayden Island, the 1,400 acre island located in the Columbia River between Oregon and Washington. The purpose of the planning initiative is to develop a collaborative vision that will guide the island's land use policies, public infrastructure investments and development/redevelopment strategies.

The outcome of the Hayden Island Plan is being influenced by regional transportation investments. Specifically, the Columbia River Crossing (CRC), the rebuilding of Interstate-5, and the associated potential extension of Interstate MAX (TRI-MET's Yellow Line) from the Expo-Center to Vancouver, Washington are framing land use opportunities on the Island.

The purpose of this memorandum is to provide further explanation and clarity to the light rail alignment and station location options presented in the Hayden Island Concept Plan dated January 2008.

OVERVIEW

Transportation infrastructure has always influenced land use, from cities forming at a cross roads and along rivers, to associated land use changes around freeway interchanges and transit stations. There is little doubt that highways assist in dispersing land uses at a regional level, while transit investments help concentrate patterns of development. Yet transportation's impact on land use at the neighborhood, block and pedestrian scale is not determined by the mode of travel,

but by the quality of its design and integration with adjacent land uses.

The Hayden Island Concept Plan provides an integrated land use and transportation evaluation of various light rail alignments and station locations. This evaluation looks at the form, function and impacts of three potential light rail alignments and station locations serving Hayden Island, its existing population, its immediate development opportunities, as well as its long-term development vision.

The location of a station alone will not determine the success or failure of a transit's ability to influence land use. Unfortunately, transit is not the silver bullet in determining a development opportunity's outcome. Many factors inform transit's ability to influence development. This memorandum's evaluation utilizes an integrated land use and transit evaluation, examining:

- **Station area land use context** informing the station's reach and influence and the transit oriented development opportunities immediate and long-term.
- **Alignment options** and engineering realities of extending light rail transit from the Expo Center to Hayden Island and ultimately over the Columbia River to Vancouver, Washington;
- **Functional expectations** of the station in-terms of intermodal interface, pedestrian/bicycle access and vehicle access.

STATION CONTEXT

The surrounding built environment is an informing factor in light rail transit (LRT) alignment and station placement and design. Like the rest of the Portland Region, transit facilities on Hayden Island should respect their surroundings and their place in the

community fabric rather than becoming an object in the landscape that detracts from the value and character of an area.

Different station area contexts demand different design responses; they also demand different planning and development strategies. The effort of redevelopment or infill development in one place may not be appropriate in another.

Hayden Island is a well established suburban neighborhood and commercial area. The area is extensively built-out; however, the Island is not walkable and lacks orientation to a quality public realm. Block structure and vehicle access is limited to fewer larger and faster roads than what is seen in traditional transit supportive areas.

Hayden Island is not transit supportive and needs significant physical modifications to become transit ready. Hayden Island has an established low-density residential area that will likely never change over-time. Yet, the island's commercial center has the potential to become a unique high quality transit village.

The placement and design of the proposed LRT alignment and station will inform the short-term and long-term success of the potential transit village.

Development Opportunities

Over-time significant TOD opportunities exist on Hayden Island. The Jantzen Beach SuperCenter and the commercial land uses adjacent to Interstate-5, both east and west, can potentially redevelop in the long-term and could contribute to an eventual transit village on the Island. In total, approximately

115 acres of commercial land should redevelop over-time, 90 acres west of I-5, and 25 acres east of the Interstate.

Creating a successful transit oriented environment is an art, not a science. It is always a challenge to understand the motivations of individual land owners, their investment partners, and potential needs of their future tenants. Transit investments alone do not necessarily motivate development interests in areas that do not already support transit. Developers are rightfully conservative with their investments. However, the alignment of LRT, the placement of a station, and the quality of its design will influence the potential for redevelopment on Hayden Island.

Long-term Transit Village Development Opportunities

Total of 115-acres of land will likely change overtime.

- Approximately 90-acres west of I-5
 - Jantzen Beach SuperCenter.
- Approximately 25 Acres east of I-5.
 - Excluding Red Lion Hotel.



Development Opportunities

ALIGNMENT OPTIONS

The first step in understanding light rail transit and potential station locations on Hayden Island is to understand the potential rail alignment, both from a horizontal and vertical perspective. There are choices for the LRT alignments and the station location on Hayden Island. During the design workshops three conceptual alignments were explored and evaluated to determine the best location for a transit station on Hayden Island. All alignment options are located west of Interstate-5 because the system is expected to extend from the existing Interstate MAX (Tri-Met's Yellow Line), which serves the Expo-Center, and reach downtown Vancouver, WA, both west of Interstate-5. The options are:

West of I-5 - Along the west side of the Interstate

- LRT will be built on structure, 35' above ground level.
- +/- 3,900' of track from the Expo-Center across Hayden Island.
 - +/- 2,400' of aerial structure on Hayden Island.
 - Possible fill sections along Interstate.
- Aerial station (adjacent to I-5)

Middle of Center - In the middle of the Jantzen Beach SuperCenter

- LRT will be built on structure, 35' above ground level.
- +/- 6,100' of track from the Expo-Center across Hayden Island.
 - +/- 3,400' of aerial structure on Hayden Island
- Aerial station (center of SuperCenter)
- Requires a rebuilding of the Expo-Center Station

West of Center - At the western edge of the Jantzen Beach SuperCenter

- LRT will be built on structure and at-grade.
- +/- 8,400' of track from the Expo-Center across Hayden Island.
 - +/- 2,000' of aerial structure on Hayden Island
- At-grade station (west of SuperCenter)
- Requires a rebuilding of the Expo-Center Station



"West of Interstate-5" Alignment



"Middle of Center" Alignment



"West of Center" Alignment

Engineering requirements alone should not dictate alignment and station location considerations. However, they are very important in understanding the potential capital cost and operating cost of a transit system. If federal New Starts funding is needed for this project, it is important to note that this project will be competing against other cities' premium transit projects. The cost of the system vs. potential new riders will be a key determinant.

To stay competitive for New Starts funding, this project will need to select the alignment and station location that minimizes costs (both capital and operating) and maximizes the land use potential of the transit line.

It appears that the "West of I-5" options requires the least amount of track and does not require the rebuilding of the Expo-Center Station. This option also is likely the least expensive to build and the least expensive to operate.

FUNCTIONAL EXPECTATIONS

Transit stations serve many purposes. At their very basic level, they are the interface between the rider and the transit system, a place where a passer-by becomes a customer. However, successful transit stations which integrate into a community excel at other responsibilities. In addition to the transportation responsibility, there is a placemaking responsibility -- defining how the station responds to its surroundings, creating or adding to the character of the place. Depending on its size, the stations have a land development role in maximizing the placement, size and design of the private investments adjacent the platform.

A station's mobility function is typically defined by a station's service area, the volume of customers utilizing the station, and the modes by which customers can and do access the station.

The geography of Hayden Island makes it simple to determine its service area. It is the island. The reach of its impact is limited to the island because the existing Expo-Center Transit Station and the proposed station in Vancouver will capture regional vehicle based customers (both private vehicles and transit bus) off the island.

Yet, the island's size will not be the only determinant of the station's ultimate function. The island's infrastructure, specifically Interstate-5, will inform the various modes accessing the station and ultimately the station's function. Currently, there are approximately 1,500 homes and over 850,000 square feet of commercial uses on the island. The residential units are split by interstate-5, while the majority commercial uses are concentrated west of Interstate-5.

Mobility Function

The mobility function of all three proposed station locations will have the majority of customers accessing the platform as pedestrians. Most of the customers will be accessing the station from the adjacent commercial areas and eventual transit village. However, due to the island's length and the barrier effect of the Interstate-5 (and its expansion), it is reasonable to expect a percentage of customers will arrive by bicycle and private vehicle. The station would be well-advised to provide bicycle storage and a small park-n-ride (5-25 spaces) for residents with disabilities and to discourage local vehicle traffic on Interstate-5. None of the three station alternatives are expected to provide off-street facilities for a bus interface.

Possible Station Elements (All Options):

- **Station Service Area** - 1/2 to 1 - mile . . . the island
- **Pedestrian Accommodations** - Station amenities should be designed to define the future street amenities of the larger station area.
- **Bus Accommodation** – No off-site facilities. If bus transfers, occur they would be designed on-street.
- **Taxi/Kiss & Ride** - No off-site facilities. Taxis / kiss & ride would be designed on-street in designated areas.
- **Park-and-Ride** – Limited (5-25 spaces).

Economic Development Function

The anticipated footprint of this station is relatively small. This minimal station footprint will leave limited opportunities for joint development on future transit system property. However, the station's location and design will greatly inform the redevelopment potential of the Jantzen Beach SuperCenter and an eventual transit village on Hayden Island.

Station Location alternatives impact differently the redevelopment potential of an eventual Transit Village on Hayden Island. This evaluation examines each LRT alignment and station location in terms of its impact on the short-term redevelopment of the Jantzen Beach SuperCenter and the long-term development of a transit village on Hayden Island.

Unfortunately, in examining the transit options from an economic development point of view, there is no clear winner. There are strengths and weaknesses with each of the three alternatives.

Two primary challenges impact the area's ability to create a successful transit village for all three: Interstate-5, and the required aerial transit infrastructure.

Interstate-5 improvements will increase the mobility of the region and improve vehicular access to Hayden Island. The reconstruction of Interstate-5 will positively impact the development potential of Hayden Island. However, improvements to vehicular mobility and access are not always supportive of creating pedestrian environments and successful transit villages.

Interstate-5 splits the development opportunities on Hayden Island for pedestrians and limits access to its surface arterials. The 300-foot barrier between development opportunities will disrupt the quality of the walking environment and continuity of a transit village. Furthermore, the quality of the pedestrian environment adjacent to Interstate-5 will always be challenged by the noise and exposure of the freeway.

Aerial Structures tend to divide areas, creating physical and visual barriers to a community's continuity and walkability. Aerial transit stations increase the distance pedestrians are required to walk, as opposed to at-grade stations. Aerial stations tend to take pedestrian activity off the street, reducing a sense of activity and security. Because of the vertical disconnect, aerial transit stations have difficult times integrating into the public realm. Streets and buildings interact at street level. Aerial stations are separated from the street level, complicating pedestrian interaction with the station, street activity, and building access.



Aerial Transit Station, Burnaby, British Columbia

West of Interstate-5

Alignment: Aerial Structure

Station: Aerial

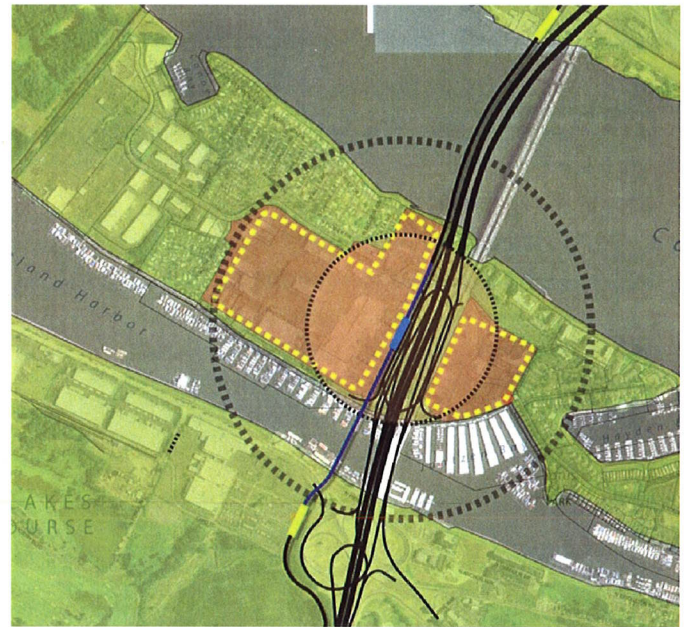
Continuity of Parcel: Complete

Timing of Development: Flexible

Transit Construction Impacts: Minimal

Short-term Development Opportunity: Good

Long-term Development Opportunity: Good

**Middle of Center**

Alignment: Aerial Structure

Station: Aerial

Continuity of Parcel: Disrupted

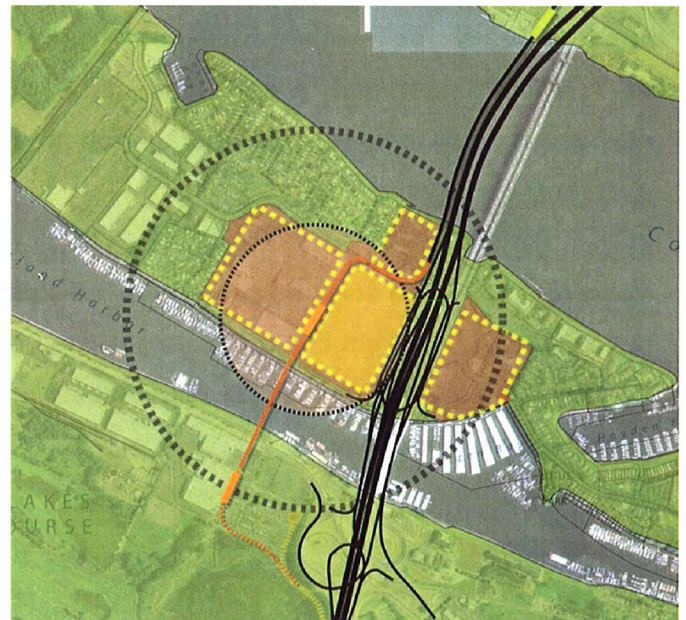
Timing of Development: Constrained

Transit Construction Impacts:

- Timing of development
- Access to/from Interstate-5

Short-term Development Opportunity: Challenged

Long-term Development Opportunity: Challenged



West of Center

Alignment: Transitions between aerial structure and grade.

Station: At-grade

Continuity of Development: mostly complete

Timing of Development: Flexible

Transit Construction Impacts:

- Access to/from Interstate-5

Short-term Development Opportunity: Good

Long-term Development Opportunity: Good



Two transit alternatives generate reasonable redevelopment opportunities for the eventual creation of a transit village. Both the “West of Center” and “West of Interstate-5” options create a contiguous development parcel and position the site for both short and long-term success.

However, due to the at-grade potential of the station and the increased distance from the Interstate position the “West of Center” is the alternative with the strongest economic development opportunity.

Placemaking Function

A transit station’s placemaking responsibility is defined by the quality of its surrounding context. In an existing vibrant walkable area, a transit station’s primary placemaking responsibility is limited in that it needs only to fit into the existing fabric, not detract from the quality of the public realm.

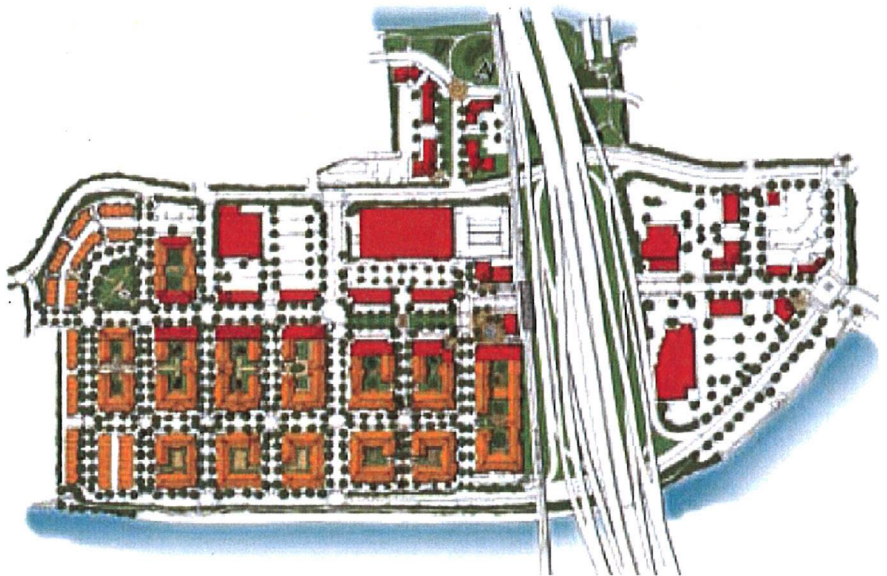
Yet in areas with poor walkable environments, like Hayden Island, a transit station’s responsibilities are more involved. The

station will need to elevate and enhance the character of the public realm and sense of place, and encourage the private development community to design and build more walkable environments that support transit development patterns.

The Hayden Island transit investment is likely to be the most significant public infrastructure investment for placemaking on the island. Each of the three Hayden Island station option locations lack a sense of place and a quality public realm. The design for all three stations will need to establish a quality, or standard, that exceeds the quality of the surrounding area.

Two primary placemaking challenges face each transit alternative: 1) Hayden Island lacks a strong public space to focus development opportunities; 2) aerial transit infrastructure negatively impacts the quality of the public realm.

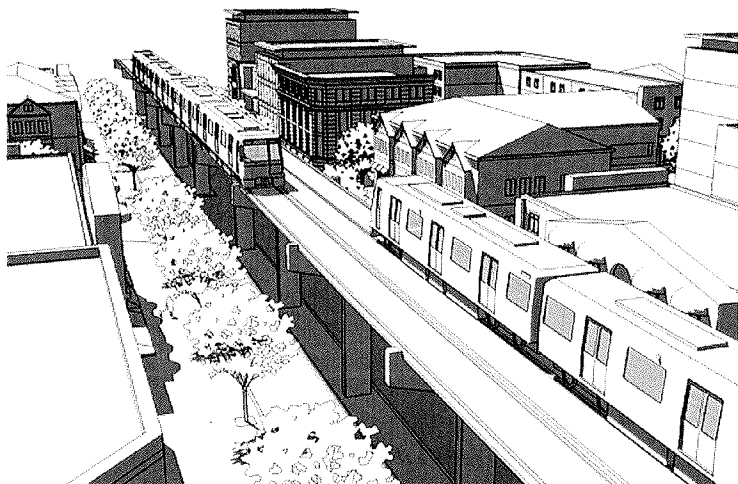
Public Space Transitioning Hayden Island's commercial areas from a car dominated environment to a shared vehicular, pedestrian and transit environment will take significant modifications to the current development pattern. It will be a challenge for transit alone to incentivize the development community to orient new development to a future transit station. A well designed public space, such as a park, or a well positioned plaza accompanying the proposed transit facility on Hayden Island is recommended to assist in future transit-oriented development toward the station.



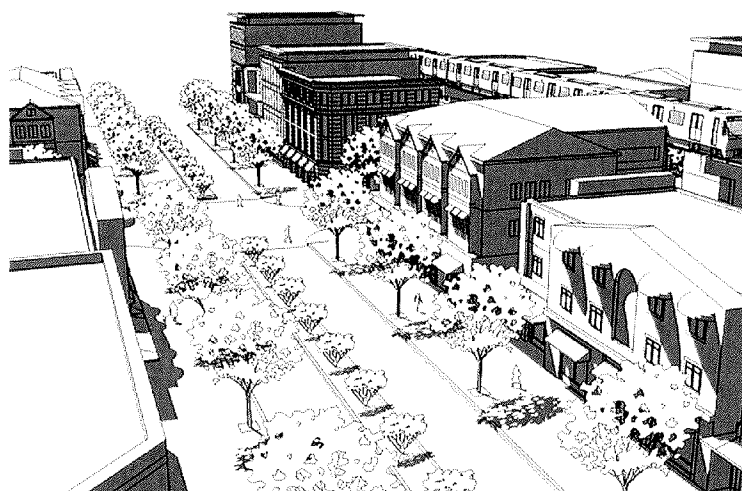
Public Spaces like plazas and Parks along with the transit station will incentivize the development community to orient around a transit stop.

As stated earlier, **Aerial Structures** place unique challenges on the quality of the public realm by creating a barrier, not a seam, within a community.

Fortunately, the City of Portland can implement basic placemaking parameters to the alignment selection and design of the transit facility to minimize impacts on the aerial structure and aerial stations. In addition, area design guidelines that require the transit alignment to run behind buildings rather than in front of buildings would minimize the negative impacts of an aerial structure in the public realm within the right of way.



Aerial structures consume the volume of the Public Realm creating a barrier that discourages street level activity.



If an aerial structure is required, it is encouraged to place the alignment behind development asking it to only cross the public realm, not run along it.

RECOMMENDATIONS

In reviewing each of the three transit alternatives for Hayden Island, two of the three alternatives provide engineering, mobility, land use, placemaking, and economic development opportunities as rationale for their ultimate selection. Yet, one alternative, the "Middle of Center" alternative fails to position a

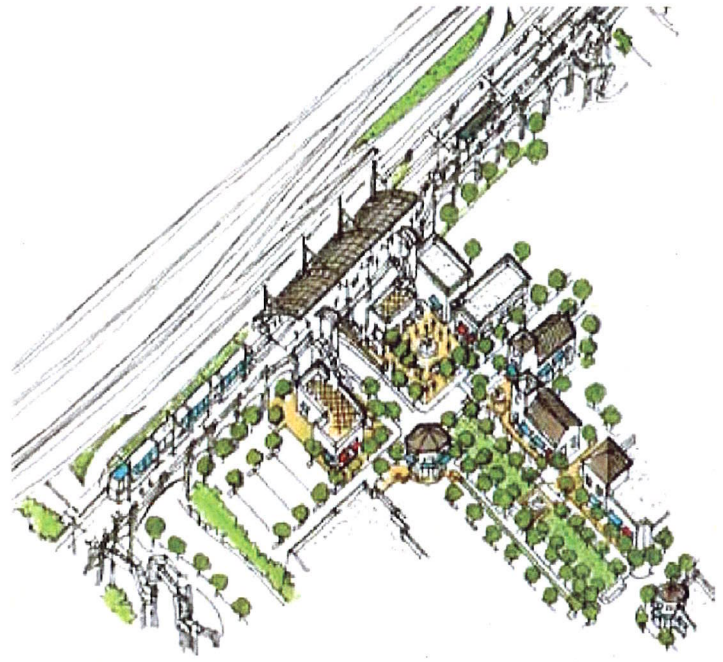
viable transit system with the necessary flexibility to create a successful transit village on Hayden Island.

The “West of Center” alternative provides slightly better positioning for the redevelopment of Hayden Island’s commercial core into a transit village. However, the “West of Interstate-5” alternative clearly provides the best transit engineering alternative.

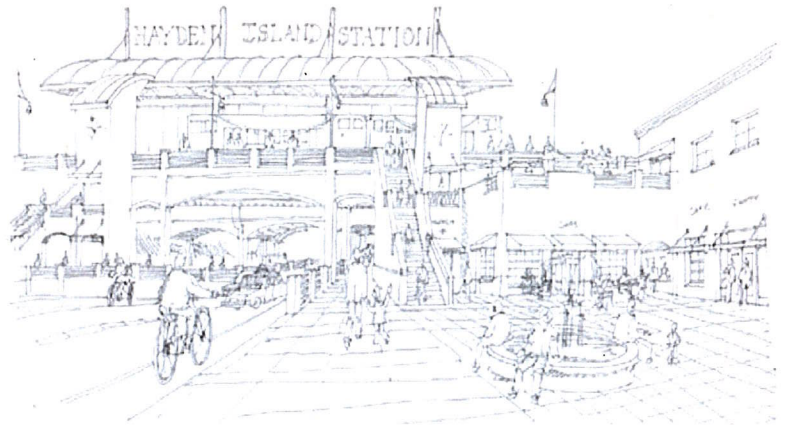
The design team perceives incremental benefits for land use on the “West of Center” alternative over the “west of Interstate-5” alternative, as it did not provide enough justification for the additional 4,000 linear feet of guideway and the additional costs both from a capital and operating perspective.

The design team believes there are design solutions to minimize the impacts of Interstate-5 on the transit station and the overall transit village. Placing the transit station adjacent to the Interstate will enable the transit village to use the station itself as a programmable civic anchor adjacent to the Interstate, while civic community park can anchor the transit village’s transition into the adjacent neighborhoods.

The design of the station must insure the quality of the transit experience it not compromised by its adjacency to the Interstate. The design of the station will need to shield the platform from the Interstate and open the station toward the future transit village. The station’s design will include vertical connections to the street level and should be designed not to preclude horizontal connections to future adjacent buildings.

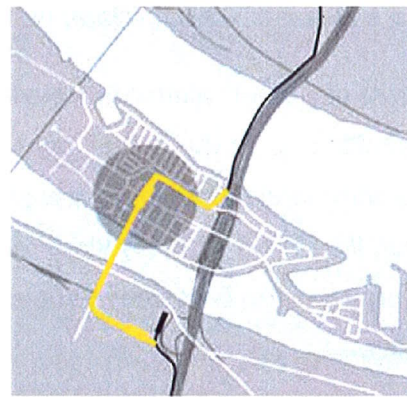
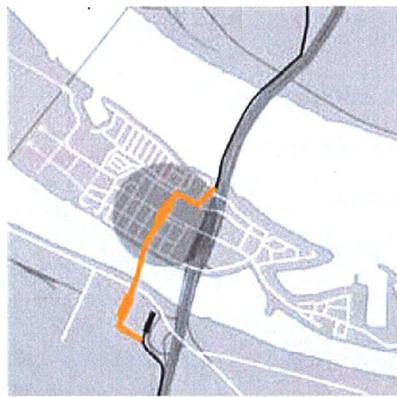
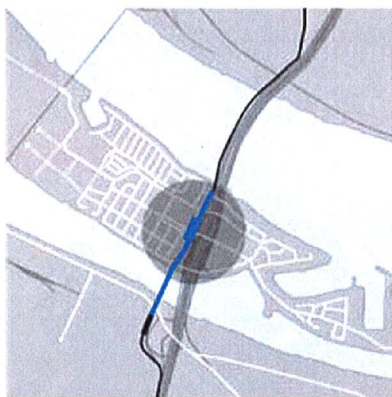


Station concept for the “West of Interstate-5” alternative.



Eye-level view of “West of Interstate-5” station concept.

Each of these options has benefits and consequences. The table below outlines the pros and cons.



	1. West of I — 5	2. Middle of Center	3. West of Center
PROS	Station location creates a defined edge of the public realm along I-5		Station location creates defined edge of the public realm along west side of Jantzen Beach SuperCenter
	Serves near and long term needs of Island		Serves near and long term needs of Island
	Serves near and long term needs of Expo Center	Serves long term needs of Expo Center	Serves near and long term need of Expo Center
	Alignment and station are central to the Island's population	Provides some opportunity for redevelopment to the west on areas currently zoned industrial	Provides greatest opportunity for redevelopment to west on areas currently zoned industrial
	Minimal traffic impacts		
CONS	Shortest travel time of three alignments		
	Reduces potential for redevelopment to the west on areas currently zoned industrial	Alignment and station are less central to the Island's population	Alignment and station are distant from Island's eastern population
	Location of station along freeway may reduce station quality due to proximity to highway	Approximately 2000 ft longer than west of I-5	Approximately 4000 ft longer than west of I-5
		Requires rebuilding Expo Center station: disruptive in the near term	Requires rebuilding Expo Center station: disruptive in the near term
		Station location disrupts the quality of the public realm west of I-5 with additional overhead infrastructure	Traffic impacts are high due to the ground level location of the station and rail alignment

Hayden Island Final Plan
APPENDICES

Section B-5

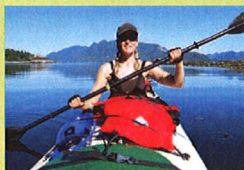
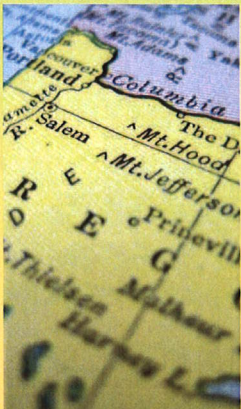
— **Hayden Island Final Concept Plan** *12/2008*

183124

HAYDEN ISLAND

Portland's Only Island Community

FINAL CONCEPT PLAN | April 2008



Introduction



Hayden Island is the only island neighborhood in Portland and it provides a unique setting to its residents and businesses.

All cherish its small town ambiance and river lifestyle in the middle of the Columbia River with easy access to the amenities of Portland and views of the Cascades.

CONCEPT PLAN

In August 2007, the City of Portland and the Hayden Island community began a collaborative effort to develop a plan for the eastern half of the Island. In January 2008, the Concept Plan went out for consultation with the Hayden Island community. The following is the final Concept Plan produced by the Steering Group, consultants and the City of Portland staff. The Concept Plan for Hayden Island considers future growth, access and connectivity, the community and the environment and will serve as the direction for the final plan and zoning code changes that will be developed later this year.

single-family homes, major shopping areas, marinas, and industrial uses. West Hayden Island is outside the City limits and mostly owned by the Port of Portland. It is undeveloped containing wetlands, riverside forests, and a Columbia River dredge material handling facility.

The Hayden Island is a community of 2155 permanent residents which grows in the summer when the owners of the 5000 boats moored on the Island visit and take advantage of the marine experience.

PLAN DEVELOPMENT AND PURPOSE

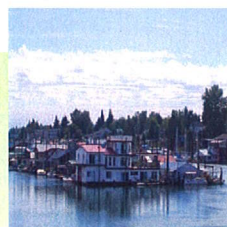
The role of this plan is to provide clarity to residents, property owners and the City of Portland regarding the island's desired future land use, development, capital improvements and other steps toward realizing this future.

The development of the plan has involved a series of formal and informal community meetings, interviews and other opportunities for public input; the largest of which was a series of public workshops held on October 16 -20, 2007 at the Jantzen Beach SuperCenter. During the workshops, urban designers, city planners and traffic engineers worked with property owners and members of the community to begin formulating the goals of the community into a physical plan for East Hayden Island. The community conversation was continued in January and February 2008 with the publication of the Concept Plan, neighborhood meetings, a large open house, and a written survey completed by more than 145 people.



Aerial view of Hayden Island; West Hayden Island is to the left of the BNSF railroad tracks.

Hayden Island is approximately 1400 acres on the Columbia River having two major sections roughly divided by the BNSF railroad tracks. Hayden Island (east of the railroad tracks) is approximately 600 acres, in the City and developed with a variety of uses—manufactured homes, floating homes, multi- and



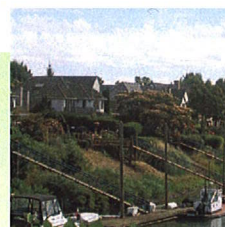
Floating Homes



Manufactured Housing



Multi-Family Condos



Single Family Homes



Yacht Club Units

HOUSING TYPE AND NUMBER OF DWELLINGS ON HAYDEN ISLAND

Floating Homes..... 360
 Manufactured Housing 440
 Multi-Family Dwellings 677
 (condominiums)

Single Family Dwellings..... 54
 Yacht Club Units 50
 (part-time housing)

Vision, Goals and Challenges

VISION STATEMENT

The Concept Plan is based on the following draft vision statement, themes and goals. They were developed in community meetings from July to October, 2007 and were based on the Neighborhood Plan document drafted by community residents in 2006.

Hayden Island is a gateway to Portland and to Oregon. The Island residents live in a variety of housing styles both on the water and the land. They are connected to regional and local businesses and industries by a network of streets and paths that sustainably treat stormwater and protect the greatest of the Island's assets, the Columbia River. On Hayden Island there is access to the River for the many boaters, and protected habitat for avian, aquatic and terrestrial life.

The Concept Plan refines this vision by defining goals for the island's future organized around three themes: Island Community, Getting Around, and Environment and Open Space. Each theme also has the goal of developing a sustainable future.

pavement needed for roads and parking, health benefits from walking and bicycling and less noise from vehicles. This is true for other parts of the plan.

CHALLENGES AND OPPORTUNITIES

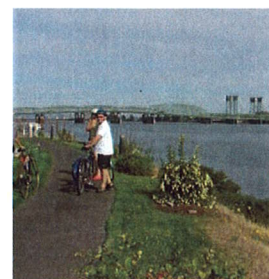
To accomplish this vision, the plan for East Hayden Island has to deal with a number of challenges and opportunities.

- The island is a great location with a small community sharing an interest in its riverside environment.
- The island's population is too small to support the retail and services desired.
- More population and/or jobs on the island are needed to support transit connections desired by its residents which will be developed with of the Columbia River Crossing project (CRC).
- Vehicle access to and from the island is limited and will remain so even with the Columbia River Crossing project. However, there will be traffic capacity for more development, and residential development.

■ Hayden Island is on the western flight path to Portland International Airport. New residential housing is not permitted in areas that were not zoned for housing in 1981.

■ An 80-acre regional shopping center, under single ownership, is about to undergo major redevelopment. The introduction of light rail transit to the island,

with the Columbia River Crossing, should create the opportunity for this center to evolve into a mixed use, and transit supportive, development.



"Maintain the 'village' feel as much as possible here on the Island."

ISLAND THEMES AND GOALS



ISLAND COMMUNITY

- ◆ Shared community identity and sense of place
- ◆ Commercial and employment areas
- ◆ Safe, connected and healthy neighborhoods



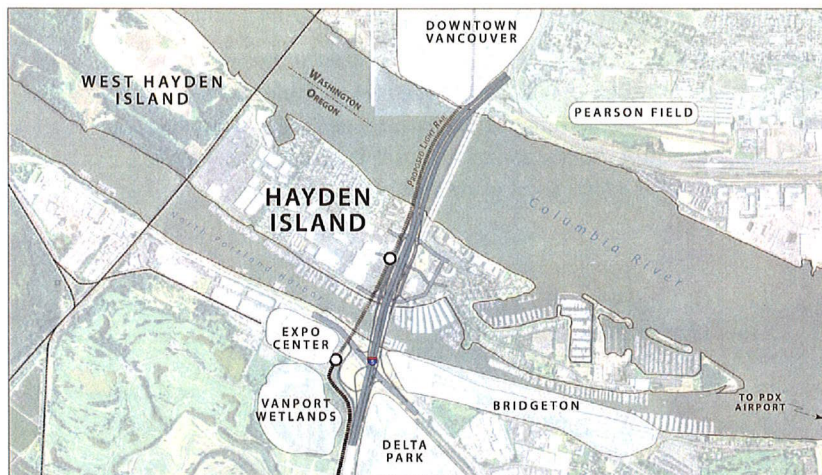
GETTING AROUND

- ◆ Better access to and from the Island
- ◆ Better connectivity on the Island
- ◆ Integrated transportation network



ENVIRONMENT AND OPEN SPACE

- ◆ Protect and conserve ecological systems
- ◆ Embrace "Green Philosophy" and practices



Hayden Island and surrounding area.

The sustainable future of Hayden Island community is being approached with a combination of policies and programs to accomplish multiple objectives. One example in this concept plan is the transportation alternatives, such as walking, bicycling and light rail, that are provided; having multiple benefits for the community. Some of these benefits are improved air quality; reduced



Important goals of the Concept Plan are to build on the river lifestyle, create opportunities for the community to come together, and provide access to the water. Also of importance to the community is to have a resident population that is large enough that local goods and services are available on the Island. This is only possible by adding new residential areas. By providing a mix of land uses on the Island, there is an opportunity for residents to both live and work on the Island in close proximity, which is a goal of sustainable development.

The Concept Plan envisions a mix of land uses to meet the future needs of the community. Just east of the railroad tracks is a large industrial area of approximately 135 acres. In the Concept Plan this area will continue to be used for industrial purposes both general and marine industrial.

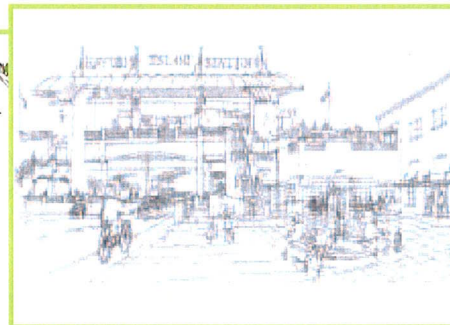
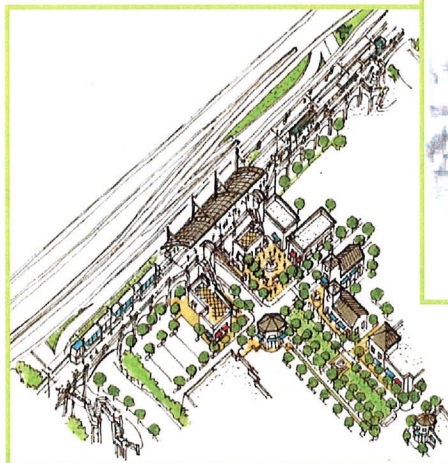
The manufactured home park remains residential and will continue to be a manufactured home park. The only changes for the floating home communities on the south shore will be some reduction in the number homes in the Jantzen Beach Moorage with the construction of the Columbia River Crossing project.

North Hughes School District

Legend:

- 1 Street Frontage
- 2 School Zone
- 3 School Zone
- 4 School Zone
- 5 School Zone
- 6 School Zone
- 7 School Zone
- 8 School Zone
- 9 School Zone
- 10 School Zone
- 11 School Zone
- 12 School Zone
- 13 School Zone
- 14 School Zone
- 15 School Zone
- 16 School Zone
- 17 School Zone
- 18 School Zone
- 19 School Zone
- 20 School Zone
- 21 School Zone
- 22 School Zone
- 23 School Zone
- 24 School Zone
- 25 School Zone
- 26 School Zone
- 27 School Zone
- 28 School Zone
- 29 School Zone
- 30 School Zone
- 31 School Zone
- 32 School Zone
- 33 School Zone
- 34 School Zone
- 35 School Zone
- 36 School Zone
- 37 School Zone
- 38 School Zone
- 39 School Zone
- 40 School Zone
- 41 School Zone
- 42 School Zone
- 43 School Zone
- 44 School Zone
- 45 School Zone
- 46 School Zone
- 47 School Zone
- 48 School Zone
- 49 School Zone
- 50 School Zone
- 51 School Zone
- 52 School Zone
- 53 School Zone
- 54 School Zone
- 55 School Zone
- 56 School Zone
- 57 School Zone
- 58 School Zone
- 59 School Zone
- 60 School Zone
- 61 School Zone
- 62 School Zone
- 63 School Zone
- 64 School Zone
- 65 School Zone
- 66 School Zone
- 67 School Zone
- 68 School Zone
- 69 School Zone
- 70 School Zone
- 71 School Zone
- 72 School Zone
- 73 School Zone
- 74 School Zone
- 75 School Zone
- 76 School Zone
- 77 School Zone
- 78 School Zone
- 79 School Zone
- 80 School Zone
- 81 School Zone
- 82 School Zone
- 83 School Zone
- 84 School Zone
- 85 School Zone
- 86 School Zone
- 87 School Zone
- 88 School Zone
- 89 School Zone
- 90 School Zone
- 91 School Zone
- 92 School Zone
- 93 School Zone
- 94 School Zone
- 95 School Zone
- 96 School Zone
- 97 School Zone
- 98 School Zone
- 99 School Zone
- 100 School Zone

Transition Plan

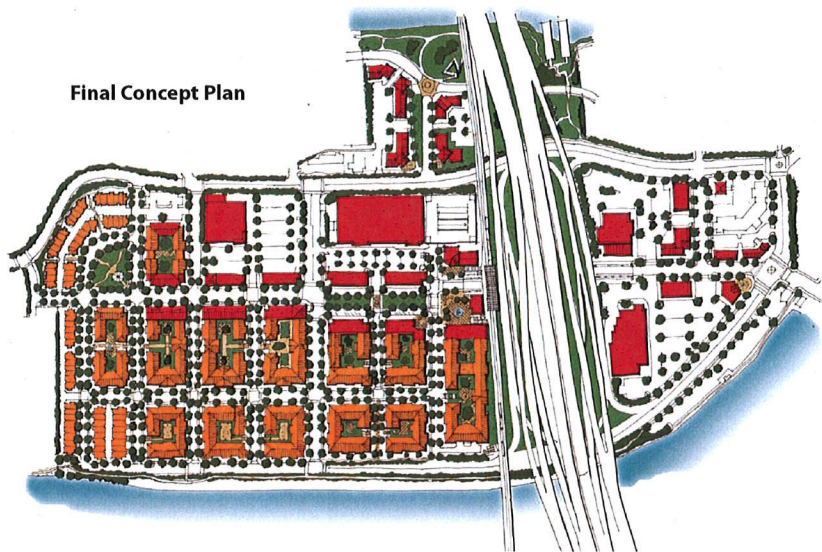


Artist rendering of the proposed light rail station designed as a landmark along the western edge of highway, I-5.

West of the Interstate-5 is the Jantzen Beach SuperCenter. This center is about to undergo a redevelopment process with the existing mall being demolished and replaced with new retail outlets in an urban grid street pattern. Building on this grid pattern, the Concept Plan proposes a transition to a transit-oriented development over the life of the plan. It is hoped that over time, the value and demand for residences on the island will be accommodated in the redevelopment of a mixed use, mid-rise center with residences, business and commercial. It is anticipated that an additional 1000 new dwelling units may be constructed in this development.

The eastern edge of the Jantzen Beach SuperCenter is the proposed site for the light rail station. The new light rail station and the redevelopment of the shopping center create an opportunity for an entrance and plaza to Hayden Island. It is important that the new station is constructed to be a landmark along the highway and as a focal point of Hayden Island.

Final Concept Plan



Potential phased redevelopment of the shopping center into a transit-oriented center.



“Neighborhood center should be designed for people — not cars.”

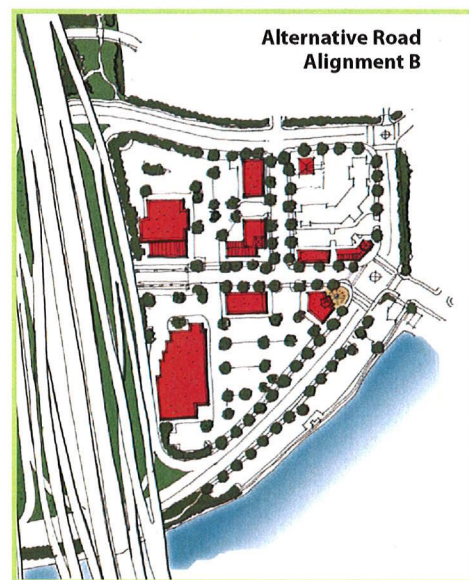
CENTRAL CORE

Every community has a center or downtown, currently Hayden Island's center is divided by the Interstate. Creating hubs on both the east and west sides of the highway is a goal of the Concept Plan. With the construction of the new highway there will be land east of the Interstate which will become available for redevelopment, potentially for commercial uses serving the community. The plan designates this area as the neighborhood retail center. It anticipates that the commercial development on this side of the highway will serve the local community and be accessible by sidewalks and local streets.

Two road networks for this area were proposed; one through the center using the existing North Jantzen Drive, and a second route around the center on a new road. The second route provides better access to the

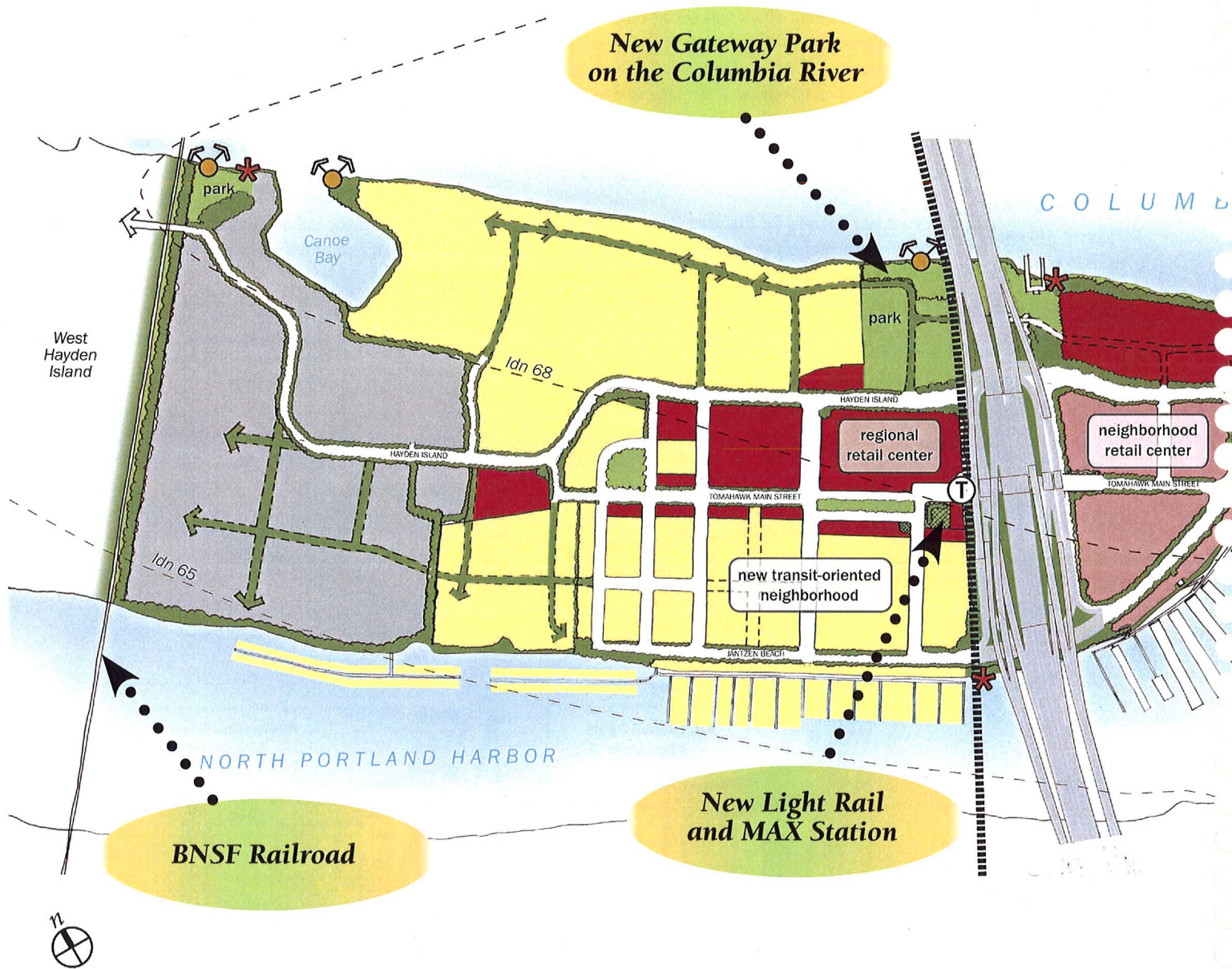
site and was the preferred option from the Community Design Workshops. The neighborhood commercial center would be connected to the west with an extension of Tomahawk Island Drive. During the community conversation this center road was preferred, although there are issues regarding the minimum distance between roads, driveways and the ramps to the Interstate. These issues still need to be addressed by the Oregon Department of Transportation and the City of Portland.

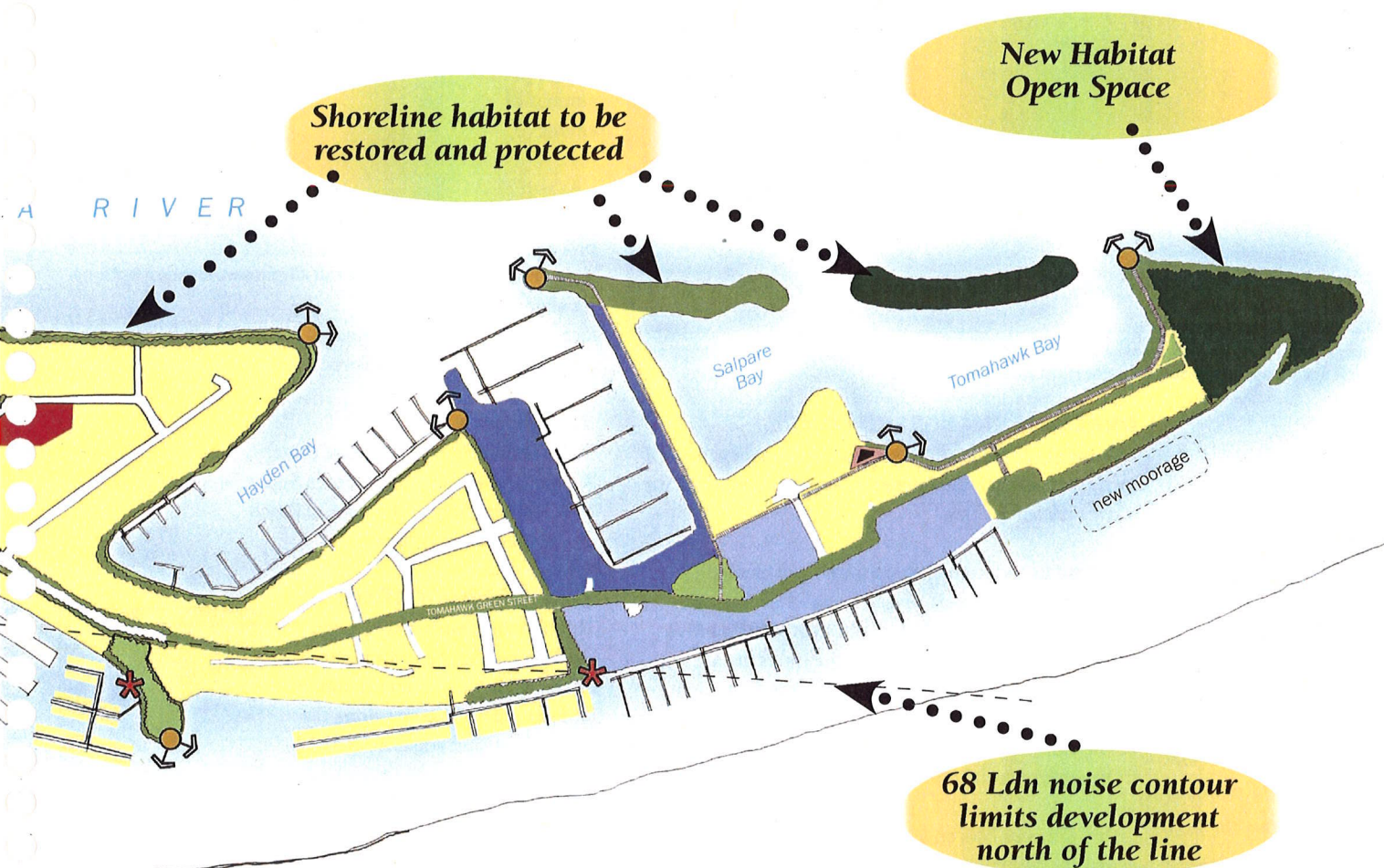
For the eastern most section of Hayden Island, the plan is proposing to preserve the residential communities, enhance the habitat at the eastern tip, expand the marine industrial district and provide for residential development on vacant lots.



Two road networks were proposed for the east neighborhood; one coming through the center shown on the left, A, and the second alternative, B, on the right, showing the road circling the neighborhood on a new road to the outside.

Hayden Island Proposed Plan





Legend

proposed land use

- regional commercial
- neighborhood commercial
- residential

- institutional
- marine industrial
- industrial

- habitat
- open space/public green street
- park

- T transit station
- small boat access
- water views / access



Columbia River Crossing conceptual drawing, looking south, showing the new bridge with light rail access along the west (lower right in drawing) side.



This Concept Plan envisions a replacement bridge across the Columbia River providing the best access for Hayden Island residents to Marine Drive without having to get on the highway, Interstate 5.

DRAMATIC CHANGES TO COME

Currently coming and going from the Island is limited by the access from the Interstate, which is congested for a large part of the day.

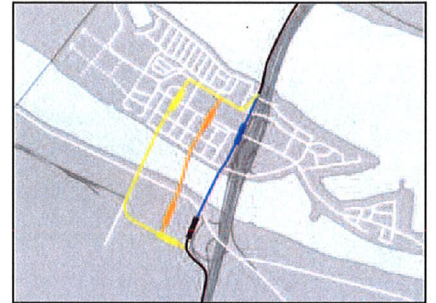
Getting to and from Hayden Island will change dramatically in the next several years. New bridges across North Portland Harbor and the Columbia River, along with a new interchange for the Interstate at Hayden Island are proposed as part of the Columbia River Crossing project. CRC also includes a light rail connection from Expo Center to the south to Vancouver in the north.

This Concept Plan envisions a replacement bridge across the Columbia River providing the best access for Hayden Island residents to Marine Drive without having to get on the highway, which is not available currently. While taking into account the future development of Hayden Island, consideration was given to the number of vehicles that could use the new interchange without causing it to become congested.

The CRC project provides for shared pedestrian and bike paths from Marine Drive through Vancouver. The path will be a wider and longer expansion of the existing path system. An expanded pedestrian and bicycle network will connect to Bridgeton and the 40-mile loop providing more sustainable access to recreation opportunities in the City.

EXTENSION OF EXPO CENTER LIGHT RAIL

A major part of the CRC project is the extension of Expo Center light rail line north across the Columbia River through Vancouver. This aspect of the plan provides the most sustainable form of frequent access to and from Hayden Island. It carries the most people using the least amount of energy.



Three light rail alignment/location options.

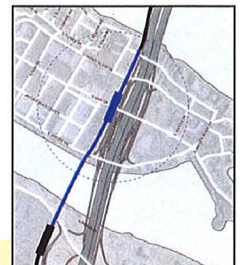
As part of the planning process, there were choices for aligning and locating the light rail. During the design workshops, three alignments were explored.

The options are:

- 1. West side of the Interstate (blue)
- 2. Middle of the Jantzen Beach SuperCenter (orange)
- 3. Western edge of the Jantzen Beach SuperCenter (yellow)

PREFERRED LOCATION

Through the Community Design Workshops and the community conversation, the preferred option for light rail is the route along the west side of, and adjacent to, the Interstate.



Pros for west of I-5 location

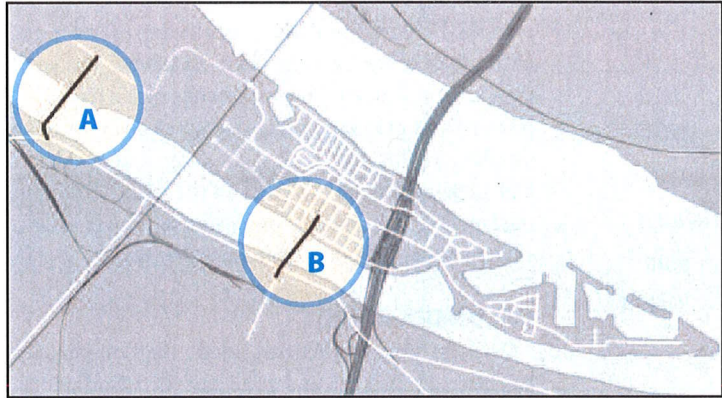
- Station location creates a defined edge along I-5
- Serves near and long term needs of Island
- Serves near and long term needs of Expo Center
- Alignment and station are central to Island's population
- Impacts fewer floating homes
- Minimal traffic impacts
- Shortest travel time

Cons for west of I-5 location

- Reduces potential for redevelopment to the west on areas currently zoned industrial
- Location of station along freeway may reduce station quality due to highway's proximity

ARTERIAL BRIDGE— TWO OPTIONS

After many conversations with the community, it was recommended that a second bridge be constructed connecting to Marine Drive. If there is a second bridge, it would need to serve future development on West Hayden Island and the community on the eastern half of Hayden Island. A second bridge would not be built unless future development on West Hayden Island proceeded; it would need to obtain all the required permits; and funding prior to its construction. Two options were explored during the design workshops and through the community conversation, one located at Force Avenue and one located on West Hayden Island. The community preference was the West Hayden Island location because it provided a direct route for trucks going to and from any potential development on West Hayden Island, limiting the truck traffic impacts on residential areas on the eastern half of the Island.



Two arterial bridge options were explored during the design workshops and through the community conversation; one located at Force Avenue (B) and one located on West Hayden Island (A). Location A was preferred.

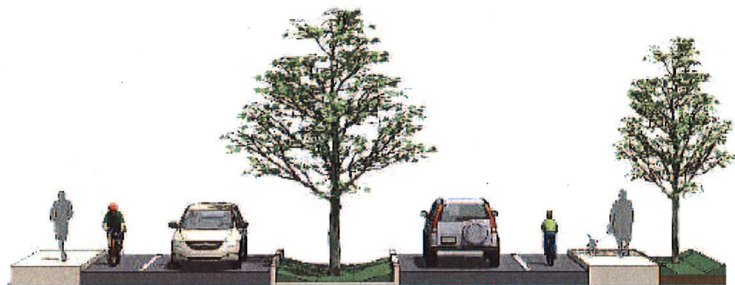
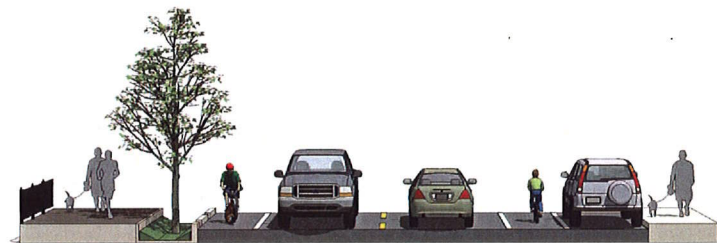
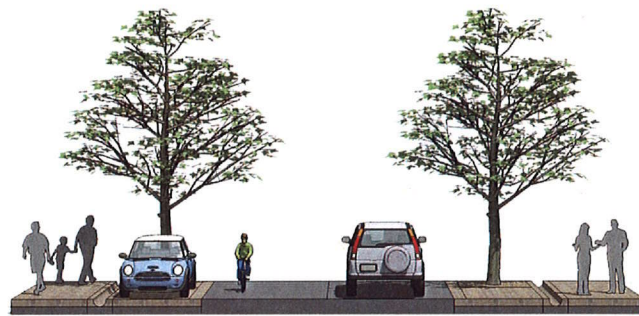


Designs showing stormwater treated naturally by soil and plants, instead of running into the sewer systems or polluting the river.

A linear planting system will be created by these Green Streets across Hayden Island.

LOCAL STREETS— ENHANCED GREEN STREETS

Getting around Hayden Island is important for Island residents and businesses. Proposed in the Concept Plan is a network of local streets that have sidewalks, bike paths, traffic lanes and, on many streets, on-street parking for visitors. Each of the streets is designed to be an “Enhanced Green Street.” These are streets that serve many purposes — providing for stormwater runoff into planters protecting the Columbia River, providing landscaped settings for walking and new habitat areas on the Island. This is new linear green space to enhance the street network and the Hayden Island environment.



Street concepts showing planters for trees, parking for cars, bike lanes, and sidewalks for pedestrians.

This future system of local streets will make it possible for residents to walk to the grocery store or other local businesses to run errands. By using the sidewalks along local streets, each trip not made in a car promotes personal exercise and uses less fuel making Hayden Island more sustainable.



Environment and Open Space

"Keep our Island beautiful... plan carefully... keep it natural."



Protecting the Columbia River for habitat for the many animals, birds, fish and plants of Hayden Island is one of the goals of the Concept Plan. To achieve this goal, the Concept Plan envisions the banks of the river are restored and protected; enhanced green streets are the standard as redevelopment takes place; and new habitat and parks spaces are provided on the Island. Additionally, the Hayden Island plan is proposing to protect areas of shallow water habitat surrounding the Island.

COLUMBIA RIVER

Over the history of Hayden Island, the Columbia River has bisected, flooded, and gone past the Island on its journey to the Pacific Ocean. It is an important river in the Pacific Northwest as a major navigation channel for the Ports of Portland and Vancouver USA. The river is an environmental and a recreational treasure for the region.

Open spaces and parks are indicated on this map.



Salmon, steelhead and lamprey migrate past Hayden Island to upstream spawning grounds; their offspring migrate back to the Pacific Ocean. During this migration, which varies in season, salmon will use the off channel and shallow water habitat on the shores of Hayden Island. Other salmon use the River year round, inhabiting the Island's off channel and shallow water habitat.

Birds and other wildlife use the Columbia River corridor. Hayden Island is part of a habitat complex that includes Smith and Bybee wetlands, Ridgefield Wildlife Refuge and the Lower Columbia River Estuary. More than 100 species of birds are attracted to this area, including bald eagles that have been sighted nesting on both the eastern and western ends of the Island. The protection of aquatic, avian and terrestrial species including endangered species is important for the Columbia River and Hayden Island.

To protect this vital asset it is important to know that Hayden Island is in the Columbia River watershed. All

run off from Hayden Island drains into the Columbia River. In order to protect the River's water quality, it is imperative that water drained from the Island is as clean as it can be before it enters the river.

ENHANCED GREEN STREETS PROPOSED

The Hayden Island Plan proposes development of enhanced green streets to filter stormwater runoff into the Columbia River, to protect its water quality. The Concept Plan is proposing that as streets are redeveloped they are built as enhanced green streets. These are streets designed so that the stormwater moves to swales and other structures where soils and plants reduce pollutants. Green streets also reduce impervious surface so that stormwater can infiltrate to recharge groundwater and surface water. The streets will become a linear system of open space across the Island.

RIVER BANKS AND BEACHES

As part of the Hayden Island Plan it is proposed that areas of shallow water habitat surrounding the Island are protected. This shallow water habitat, including beaches, is home to young fish and is vital in nurturing the protection and re-population of endangered species. The Concept Plan proposes replanting along the banks of the Columbia River with native species to further filter runoff and provide habitat for terrestrial and aquatic species. Riparian areas should be protected from further rip-rap/hardening and where possible rip-rap should be removed.

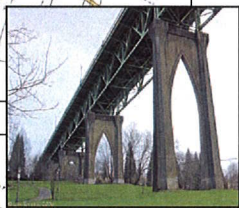
One of the actions in the proposed plan will be a habitat-based replanting plan for the banks of the river and plants to add to gardens to enhance the natural environment on Hayden Island. This replanting plan will apply where appropriate to new sections of the trail system.

OPEN SPACE PROTECTION PLAN

The protection of open space for habitat that is not used by people is necessary to restore the balance needed for restoring endangered species that use the Island and Columbia River for habitat. The eastern tip of the Island is a habitat area that the plan seeks to protect in perpetuity.

NEW PARKS

The community desires access to the river for viewing, swimming and boating. To the west, adjacent to Grandma's or Canoe Bay and the railroad tracks, it is proposed that a park is developed with beach access to the Columbia River.



Park concepts under I-5 highway, similar to Cathedral Park under the St. John's bridge.

A new park should be developed west of the highway on the Columbia River. This new park should be designed in a way to provide for a diversity of unstructured and structured recreational opportunities for both residents and visitors to the island. To enhance the parks potential recreational spectrum and to limit some of the costs, consideration should also be given to the establishment of a restaurant/café or similar visitor-related commercial enterprise that makes the park active year round. The

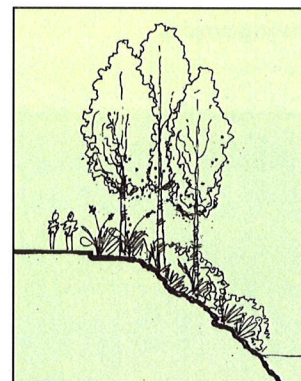


new park could extend eastward under the new bridge, if the crossing allows adequate air and light, and is not too noisy.

Facilities for docking motorized and non-motorized boats (kayaks and canoes) may be provided at new parks. These facilities will provide residents and non residents' opportunities to access the Island's marine-related businesses.

ISLAND TRAILS, WALKWAYS TO BE CONNECTED

On Hayden Island there are private walkways that are not connected. The Concept Plan recommends that these walkways be connected into a system of trails providing viewpoints of the River and the Cascades. This would be done with easements and be a private system for the Island community. Although some of these paths currently exist there was concern from some of the land owners to expand this system and there was approval from others about having such a system. Path systems provide a means of active recreation that is convenient and sustainable for communities.



Island trails providing access to the Columbia and views of the mountains will be linked with easements, and be a private system for the Island residents.

CENTRAL PLAZA DESIGN NEAR MAX LIGHT RAIL STATION



It is hoped that the plaza near the MAX station is an active community space, as in this photo.

At the center of the Island, it is proposed that a new plaza be part of the design for the light rail station. This open space is intended to be an active plaza for informal gatherings over coffee and conversation. This plaza will be connected to the park and green edge on both the northern and southern sides of the Island.

Next Steps



PROPOSED FINAL PLAN TO BE PRESENTED TO THE PLANNING COMMISSION SUMMER 2008

The Hayden Island Concept plan was presented to the Portland Planning Commission at a briefing on March 25, 2008. It will be followed by a public hearing on April 8th. It is anticipated that the Planning Commission will provide a recommendation on the direction of the plan in light of the proposed Columbia River Crossing project.

The information contained in this Concept Plan combined with the recommendations of the Planning Commission will form the foundation of the final plan for Hayden Island, the recommended changes to the Comprehensive Plan and zoning code. The Bureau of Planning, working with each of the City Bureaus and the community, will collaboratively develop the proposed final plan. This proposed final plan will be presented to the Planning Commission in summer 2008 and then be forwarded to the City Council for hearing and adoption.

If you have any questions regarding this concept plan or the next steps, please contact Alice Ann Wetzel in the Bureau of Planning at **503-823-9711** or **AliceAnn.Wetzel@ci.portland.or.us**.



HAYDEN ISLAND COMMUNITY DESIGN WORKSHOP TEAM

David Evans and Associates, Inc.
SERA Architects + Urbworks
Van Meter Williams Pollack
Kevin Gardiner and Associates
Glatting Jackson Kercher Anglin
Parisi Associates
Marketek

WRITING AND CONSULTING

Alice Ann Wetzel, Elisa Hamblin; City of Portland, Bureau of Planning
Mary Weber; David Evans and Associates

GRAPHIC DESIGN

Plan Logos: Ralph Sanders, Christine Rains; Bureau of Planning
Concept Plan: Cheryl Nangeroni; Nangeroni Designs

